```
CAS/STN FILE 'HCAPLUS' ENTERED AT 07:40:23 ON 01 MAR 2005
               E US20040109114/PN
             1 S US2004109114/PN
L1
               D ALL
     FILE 'WPIX' ENTERED AT 07:40:50 ON 01 MAR 2005
               E US20040109114/PN
             1 S US2004109114/PN
L2
               D MAX
     FILE 'STNGUIDE' ENTERED AT 07:41:13 ON 01 MAR 2005
     FILE 'STNGUIDE' ENTERED AT 07:47:07 ON 01 MAR 2005
     FILE 'HCAPLUS' ENTERED AT 07:49:02 ON 01 MAR 2005
     FILE 'HCAPLUS' ENTERED AT 07:49:12 ON 01 MAR 2005
L3
             1 S
                    2255/SO AND 1989/SO AND 190/SO
                    (5 AND 107 AND 1993 AND (ADV OR ADVANCED))/
L4
             2 S
               so
                   (US4683327 OR US5622648)/PN
L_5
             2 S
     FILE 'STNGUIDE' ENTERED AT 07:49:13 ON 01 MAR 2005
     FILE 'HCAPLUS' ENTERED AT 07:52:09 ON 01 MAR 2005
L6
                   (US5770107 OR WO9522586 OR WO9524455 OR
               WO9700600 OR WO9823580 OR WO9852905 OR JP01272551 OR JP64272551
                OR JP06016616)/PN
     FILE 'STNGUIDE' ENTERED AT 07:52:09 ON 01 MAR 2005
     FILE 'HCAPLUS' ENTERED AT 07:53:23 ON 01 MAR 2005
L7
                    (JP07110469 OR JP11080081 OR JP2001064627)/
               PN
L8
            16 S
                    (L3 OR L4 OR L5 OR L6 OR L7)
               SEL PLU=ON L8 1- RN : 330 TERMS
L9.
     FILE 'REGISTRY' ENTERED AT 07:53:53 ON 01 MAR 2005
L10
           330 s
                    L9
           324 S
                   L10 AND C/ELS
L11
     FILE 'HCAPLUS' ENTERED AT 07:54:07 ON 01 MAR 2005
         604458 S
L12
                   L9
            16 S L8 AND L12
L13
               D ALL HITSTR TOT
     FILE 'WPIX' ENTERED AT 07:58:05 ON 01 MAR 2005
L14
               SEL PLU=ON L2 1- IC :
     FILE 'HCAPLUS' ENTERED AT 07:58:52 ON 01 MAR 2005
L15
               SEL PLU=ON L1 1- IC FTERM: 15 TERMS
     FILE 'STNGUIDE' ENTERED AT 07:58:56 ON 01 MAR 2005
     FILE 'HCAPLUS' ENTERED AT 07:59:27 ON 01 MAR 2005
L16
         39436 S
                   G02F001-133?/IC OR 349117?/NCL
         604458 S
L17
                   L9
         22251 S
                   1.14
L18
          7926 S
                   L15
L19
L20
           971 S
                   L17 AND (L18 OR L19 OR L16)
                    (DIFFERENC### OR PHAS## OR RETARD########)
L21
           155 S
               AND L20
L22
         604458 S
                   L9
                    (DIFFERENC### OR PHAS## OR RETARD########)
L23
          68036 S
                AND L22
L24
        604458 S L9
```

```
L24(L)(PHAS#### OR DIFFERENC### OR
L25
         10919 S
               RETARD######)
L26
             45 S
                    L21 AND L25
L27
         10908 S
                    L23 AND L25
                    L25 AND RETARDER
           114 S
L28
            60 S
                    L25 AND RETARD#####(2A)(PLATE OR FILM OR
L29
               STACK#### OR LAYER####)
            23 S
                    L25 AND PHASE DIFFERENCE
L30
            40 S
                    L25 AND (ROD### OR RODLIK#####)
L31
L32
         604458 S
                    Ь9
                    L32 AND ANISOTROP#########
L33
          3420 S
L34
         604458 S
                    L9
L35
         38124 S
                    L34 AND (POLYMERIS? OR POLYMERIZ?)
         604458 S
L36
                    L9
L37
          9789 S
                    L36 AND LINK#######
         604458 S
L38
                    L9
          4462 S
                    L38 AND ((DI OR BI OR TWO OR 2)(2A)VALEN###
L39
                ## OR BIVALEN#### OR DIVALEN######)
         604458 S
L40
                    L40 AND SINGL##(2A)BOND#####
L41
          1065 S
         604458 S
L42
                    L9
L43
          4519 S
                    L42 AND DOUBL##(2A)BOND#####
         604458 S
L44
                    L9
         76155 S
                    L44 AND GROUP
L45
         604458 S
                    1.9
L46
1.47
           7694 S
                    L46 AND (LC OR LIQ OR CRYST######### OR
                LIOUID) (2A) (POLYMER#### OR COMPOUND OR HOMOPOLYMER#### OR
                MONOMER##### OR CHEMICAL OR MATERIAL)
           2580
                    L17 AND ROD##########
L49
L50
           2580
                S
                    L49 AND ((L16 OR L17 OR L18 OR L19 OR L20
                OR L21))
                    L49 AND (L16 OR (L18 OR L19 OR L20 OR
L51
             10
               S
                L21))
            376 S
                    L49 AND L23
1.52
            42 S
                    L49 AND L25
L53
             4 S
                    L49 AND L26
L54
L55
             42 S
                    L49 AND L27
            40 S
                    L49 AND (L28 OR L29 OR L30 OR L31)
L56
L57
            47 S
                    L49 AND L33
            143 S
                    L49 AND L35
L58
1,59
            65 S
                    L49 AND L37
            14 S
                    L49 AND L39
L60
L61
             2 S
                    L49 AND L41
L62
             8
                    L49 AND L43
            277 S
                    L49 AND L45
L63
            112 S
                    L49 AND L47
L64
            41 S
                   L52 AND L58
L65
             44 S
L66
                   L52 AND L63
             47 S
                   L52 AND L64
L67
             46 S
                    L58 AND L63
L68
             46 S
                    L58 AND L64
L69
L70
             37 S
                    L63 AND L64
            761 S
                    L17 AND (LONG OR STRAIGHT OR BAR OR
L71
                SLAB##### OR STICK OR ROPE OR ROPY OR SHAFT#####) (4A) (COMPOUND
                OR MATERIAL OR CRYST######### OR MORPHOL######## OR
               MONOCRYST####### OR LC)
                     (L51 OR L52 OR L53 OR L54 OR L55 OR L56 OR
L72
                L57 OR L58 OR L59 OR L60 OR L61 OR L62 OR L63 OR L64 OR L65 OR
                L66 OR L67 OR L68 OR L69 OR L70) AND L71
L73
                     (L51 OR L52 OR L53 OR L54 OR L55 OR L56 OR
                L57 OR L58 OR L59 OR L60 OR L61 OR L62 OR L63 OR L64 OR L65 OR
                L66 OR L67 OR L68 OR L69 OR L70) AND ANISOTROP######
                     (L51 OR L52 OR L53 OR L54 OR L55 OR L56 OR
L74
                L57 OR L58 OR L59 OR L60 OR L61 OR L62 OR L63 OR L64 OR L65 OR
                L66 OR L67 OR L68 OR L69 OR L70) AND SLOW####
                     (L51 OR L52 OR L53 OR L54 OR L55 OR L56 OR
L75
                L57 OR L58 OR L59 OR L60 OR L61 OR L62 OR L63 OR L64 OR L65 OR
```

```
L76
              7 S (L51 OR L52 OR L53 OR L54 OR L55 OR L56 OR
                L57 OR L58 OR L59 OR L60 OR L61 OR L62 OR L63 OR L64 OR L65 OR
                L66 OR L67 OR L68 OR L69 OR L70) AND PHAS##(2A)(DIFFEREN#####
                OR CHANG#### OR DELTA)
L77
              4 S
                     L71 AND RETARD#######
L78
             77 S
                     L71 AND PHAS###
            108 S
L79
                     L71 AND DIFFER#######
             62 S
L80
                     L71 AND (PLATE### OR SLAB####)
             11 S
L81
                     L78 AND L79
L82
             9 S
                     L78 AND L80
             7 S
L83
                     L79 AND L80
             24 S
                     L26 AND L28
L84
            131 S L30 OR L51 OR L54 OR (L60 OR L61 OR L62)
L85
                OR L72 OR (L74 OR L75 OR L76 OR L77) OR (L81 OR L82 OR L83 OR
                L84)
L86
             23 S
                    L85 AND PHASE DIFFERENCE
             37 S L85 AND RETARD########
L87
L88
            63 S L85 AND ROD#######
           23 S
                     L85 AND PLATE
L89
L90
             10 S
                     L86 AND (L87 OR L88 OR L89)
             17 S
                     L87 AND (L88 OR L89)
L91
             7 S
                     L88 AND L89
L92
L93
             11 S
                      (L86 OR L87 OR L88 OR L89) AND ANISOTROP###
                ####
L94
             42 S
                     (L89 OR L90 OR L91 OR L92 OR L93)
                D ALL HITSTR TOT
          1564 S (L51 OR L52 OR L53 OR L54 OR L55 OR L56 OR
L95
              L57 OR L58 OR L59 OR L60 OR L61 OR L62 OR L63 OR L64 OR L65 OR
               L66 OR L67 OR L68 OR L69 OR L70 OR L71 OR L72 OR L73 OR L74 OR
               L75 OR L76 OR L77 OR L78 OR L79 OR L80 OR L81 OR L82 OR L83 OR
              L84 OR L85 OR L86 OR L87 OR L88)
L96
           56 S L95 AND rodlike
L97
           163 S
                   L95 AND ROD###(3A)(LIKE OR SHAP#### OR
              MORPHOLOG###### OR CRYST###########)
L98
           204 S (L96 OR L97) NOT L94
L99
           42 S
                   L98 AND LIQUID CRYSTALS(L) POLYMER######
           0 S L98 AND POLARIZERS
0 S L98 AND LIQUID CRYSTAL DEVICE
L100
L101
           1 S L98 AND LIQUID CRYSTAL DISPLAY
L102
           1 S
43 S
                  L98 AND OPTICAL INSTRUMENTS
(L99 OR L100 OR L101 OR L102 OR L103)
L103
L104
```

L66 OR L67 OR L68 OR L69 OR L70) AND RETARD#########

```
CAS/STN FILE 'REGISTRY' ENTERED AT 11:40:39 ON 01 MAR 2005
L1
               SCREEN 2043
               STRUCTURE UPLOADED
L2
L3
               QUE ABB=ON PLU=ON L2 AND L1
L4
             0 SEA SSS SAM L2 AND L1
L5
               SCREEN 2043
               STRUCTURE UPLOADED
L6
L7
               QUE ABB=ON PLU=ON L6 AND L5
L8
             O SEA SSS SAM L6 AND L5
     FILE 'CAPLUS, MARPAT, MARPATPREV, REGISTRY' ENTERED AT 11:46:31 ON 01 MAR 2005
1.9
             0 SEA SSS FUL L6 AND L5
            49 SEA SSS FUL L6
L10
L11
             0 SEA SSS FUL L6
L12
                S
                   L9
               SET DUPORDER FILE
L13
            49 DUP REM L11 L10 L12 (0 DUPLICATES REMOVED)
                    ANSWERS '1-49' FROM FILE MARPAT
           0
L14
                S
                   L12 AND PHASE DIFFERENCE
                S
            0
                   L10 AND PHASE DIFFERENCE
T-15
                   L11 AND PHASE DIFFERENCE
                S
L16
            0
L17
            0
                S
                    L15 AND L10
            0
                S
                    L16 AND L11
L18
                S L12 AND RETARD#######
L19
            0
                S L10 AND RETARD#######
L20
            0
                S L11 AND RETARD#######
L21
            0
                S L20 AND L10
L22
            0
                S L21 AND L11
L23
            0
                S L12 AND PLATE
L24
            0
L25
             0
                S L10 AND PLATE
L26
             0
               S L11 AND PLATE
L27
             0
                S L25 AND L10
             0
                S L26 AND L11
L28
    FILE 'HCAPLUS' ENTERED AT 11:51:51 ON 01 MAR 2005
          126 S PHASE DIFFERENCE PLATE
T<sub>1</sub>2.9
               S
                   RETARD#####(2A) (PLATE OR LAYER OR FILM OR SLAB)
L30
          2643
L31
           943
                S
                    (L29 OR L30) AND (LC OR LCD OR LIO#####(2A)CRYST###########)
                    L31 AND LINKING GROUP
L32
                S
L33
             9
                S
                    L31 AND DIVALEN######
                S
L34
            1
                    L31 AND BIVALEN######
                S L31 AND 2(3A) VALEN######
L35
            0
               S L31 AND LINKING
L36
            6
            2 S L31 AND DOUBLE BOND
L37
L38
            20 S L31 AND SINGLE BOND
                   L31 AND (ROD OR RODLIKE OR ROD OR RODS)
L39
            10
L40
            40
                S
                   (L32 OR L33 OR L34 OR L35 OR L36 OR L37 OR L38 OR L39)
L41
               SEL PLU=ON L40 1- RN:
                                          644 TERMS
    FILE 'REGISTRY' ENTERED AT 11:54:46 ON 01 MAR 2005
L42
          641 S
                   L41
L43
           582
                S
                    L42 AND O/ELS
           632
L44
                S
                    L42 AND C/ELS
L45
          427
                S
                    L42 AND 2-6/NR
           396 S L43 AND L44 AND L45
L46
          325 S L46 AND OXY
L47
           90 S L46 AND OXO
T.48
           31 S AZOMETHIN?
L49
L50
          4901 S AZOX?
            29 S L42 AND CYCLOHEXANE
L51
L52
           0 S L42 AND PHENYLPYRIMIDIN?
           8 S L42 AND PYRIMIDIN?
L53
                S L42 AND DIOXAN?
L54
```

```
L42 AND BENZONITRIL?
1.55
           105
                 S L42 AND (DIPHENYL? OR BIPHENYL?)
L56
L57
           20
                 S L56 AND CYAN####
L58
           100
                   L42 AND CYCLOHEXYL
                     (L47 OR L48) AND (L49 OR L50 OR L51 OR L52 OR L53 OR L54 OR L55 OR L56 OR L57
           148
                 S
L59
                     OR L58)
           148
                     L45 AND L59
L60
                 S
     FILE 'HCAPLUS' ENTERED AT 12:00:16 ON 01 MAR 2005
L61
             6
                S
                     L60(L) (RETARDATION OR RETARDER)
                     L60(L)PHASE
L62
            12
                 S
L63
             0
                 S
                     L60(L)DIFFERENCE
L64
             1
                 S
                     L60(L)PLATE
                    L40 AND (L61 OR L62 OR L63 OR L64)
L65
             5
                 S
             D ALL HITSTR TOT
             0 S L61 AND L62
L66
                    L61 AND L65
L67
             4
L68
             1
                    L62 AND L65
L69
             0
                     (L67 OR L68) NOT L65
L70
             1
                    L60 AND PHASE##/TI,ST,IT AND PLATE##/TI,ST,IT
                 S
                 S L60 AND PHASE##/TI,ST,IT AND (SLOW### OR
L71
             1
               RETARD####### OR DELAY#####)/TI,ST,IT
             1 S L60 AND PLATE/TI,ST,IT AND (SLOW### OR
L72
               RETARD####### OR DELAY#####)/TI,ST,IT
L73
             0 S
                    (L70 OR L71 OR L72) NOT L65
L74
             2
                 S
                     L60 AND PHASE DIFFERENCE
                     L60 AND PHASE (2A) PLATE
L75
             1
                 S
                 S
                     L60 AND DIFFEREN#####(2A)PLATE
L76
             2
                 S
                     L60 AND (RETARD##### OR SLOW#### OR
L77
               DELAY####) (5A) (PLATE OR DIFFERENCE OR PHASE)
               S (L74 OR L75 OR L76 OR L77) NOT L65
L78
               D ALL HITSTR
     FILE 'STNGUIDE' ENTERED AT 12:07:57 ON 01 MAR 2005
     FILE 'HCAPLUS' ENTERED AT 12:08:04 ON 01 MAR 2005
L79
                S ((L47 OR L48 OR L49) OR (L51 OR L52 OR L53
               OR L54 OR L55 OR L56 OR L57 OR L58 OR L59))(L)PHASE
                S ((L47 OR L48 OR L49) OR (L51 OR L52 OR L53
L80
               OR L54 OR L55 OR L56 OR L57 OR L58 OR L59))(L)DIFFERENCE
                S ((L47 OR L48 OR L49) OR (L51 OR L52 OR L53
1.81
           149
               OR L54 OR L55 OR L56 OR L57 OR L58 OR L59))(L)PLATE
                 S ((L47 OR L48 OR L49) OR (L51 OR L52 OR L53
L82
               OR L54 OR L55 OR L56 OR L57 OR L58 OR L59))(L)(SLOW#### OR
                RETARD####### OR DELAY#######)
                 S ((L47 OR L48 OR L49) OR (L51 OR L52 OR L53
L83
               OR L54 OR L55 OR L56 OR L57 OR L58 OR L59))(L)PLATE
                S ((L47 OR L48 OR L49) OR (L51 OR L52 OR L53
L84
               OR L54 OR L55 OR L56 OR L57 OR L58 OR L59))(L)(ROD OR RODS OR RODLIKE)
L85
                    L79 AND L80
L86
            11 S L79 AND L81
L87
             8 S L79 AND L82
             1 S L79 AND L84
L88
                    L80 AND L84
L89
             Ω
                 S
                    L80 AND L83
                 S
L90
             4
             3
                 S
                     L80 AND L82
L91
                     L81 AND L82
L92
              9
                 S
L93
             2
                 S
                     L81 AND L84
                     L87 AND L84
L94
             0
                 S
                     (L79 OR L80 OR L81 OR L82 OR L83 OR L84)
                 S
L95
           147
               AND PLATE/TI,ST,IT
            53 S (L80 OR (L84 OR L85 OR L86 OR L87 OR L88
L96
               OR L89 OR L90 OR L91 OR L92 OR L93)) NOT (L78 OR L65)
            11 S L96 AND RETARDER
L97
L98
            15 S L96 AND RETARDATION
            0 S L96 AND RETARDING
L99
            13 S (L47 OR L48 OR L49 OR L50) AND L96
L100
```

```
13 S (L79 OR L80 OR L81 OR L82 OR L83 OR L84)
L101
               AND L100
                S L101 NOT (L78 OR L65)
L102
            13
            13
L103
                S
                    (L79 OR L80 OR L81 OR L82 OR L83 OR L84 OR
               L85 OR L86 OR L87 OR L88 OR L89 OR L90 OR L91 OR L92 OR L93 OR
               L94 OR L95 OR L96 OR L97 OR L98 OR L99) AND L102
                    (L84 OR L85 OR L86 OR L87 OR L88 OR L89 OR
L104
               L90 OR L91 OR L92 OR L93) AND 2002-2005/PRY
L105
                S (L84 OR L85 OR L86 OR L87 OR L88 OR L89 OR
               L90 OR L91 OR L92 OR L93) AND 2002/PRY
             7 S (L84 OR L85 OR L86 OR L87 OR L88 OR L89 OR
L106
               L90 OR L91 OR L92 OR L93) AND 2001/PRY
L107
             1 S (L84 OR L85 OR L86 OR L87 OR L88 OR L89 OR
               L90 OR L91 OR L92 OR L93) AND 2000/PRY
                    (L84 OR L85 OR L86 OR L87 OR L88 OR L89 OR
L108
               L90 OR L91 OR L92 OR L93) AND 1999/PRY
L109
                S (L84 OR L85 OR L86 OR L87 OR L88 OR L89 OR
               L90 OR L91 OR L92 OR L93) AND 1998/PRY
                S ((L84 OR L85 OR L86 OR L87 OR L88 OR L89
L110
               OR L90 OR L91 OR L92 OR L93) NOT P/DT) AND 2003-2005/PY
                S ((L84 OR L85 OR L86 OR L87 OR L88 OR L89
L111
               OR L90 OR L91 OR L92 OR L93) NOT P/DT)
                S L111 NOT L110
L112
            10
L113
                     (L84 OR L85 OR L86 OR L87 OR L88 OR L89 OR
               L90 OR L91 OR L92 OR L93) NOT L104
L114
            20
                S L113 NOT L110
                S
                     (L105 OR L106 OR L107 OR L108) OR L112 OR
L115
            31
               L114
                S L115 NOT (L103 OR L78 OR L65)
L116
               D ALL HITSTR TOT
```